

**UNION COUNTY
FIRE DEPARTMENT**

**COMMERCIAL PUMPER
SPECIFICATIONS**

UPDATED: FEBRUARY 19, 2015

UNION COUNTY FIRE DEPARTMENT		Bidder Complies	
		Yes	No
<p style="text-align: center;"><u>INTRODUCTION</u> <u>PROPOSAL REQUIREMENTS</u></p> <p><u>GENERAL INFORMATION</u></p> <p>It is the intent of these specifications to secure apparatus constructed to withstand the severe and continuous use encountered during emergency firefighting services. The apparatus must be of the latest type, carefully designed and constructed with due consideration to the nature and distribution of the load to be sustained.</p> <p>These specifications detail the requirements for general design criteria of cab and chassis components, aerial device, fire pump and related components, water tank, fire body, electrical components, painting, and equipment. In evaluating the bid proposals to determine which proposal is the most advantageous, these major items shall be considered.</p> <p>Apparatus and equipment must meet the specific requirements and intent of the requirements as specified herein. All items of these specifications shall conform to the character of the proposed apparatus and the purpose for which it is intended. Criteria as specified by the National Fire Protection Association Pamphlet No. 1901, latest edition, entitled "Suggested Specifications for Motor Fire Apparatus", as approved by the American Insurance Association and International Association of Fire Chiefs, are hereby adopted and made a part of these specifications the same as if they were written out in full, insofar as they apply and are not specifically modified in the following detailed specifications. Each bidder shall provide only that equipment as required in the following specifications.</p> <p>The fire apparatus and equipment to be furnished in meeting these specifications must be the products of an established, reputable fire apparatus and/or equipment manufacturer. Each bidder shall furnish satisfactory evidence of the manufacturer's ability to construct, supply service parts and technical assistance for the apparatus specified. Each bidder must state the location of the factory and location for post delivery service.</p> <p><u>BID COMPLIANCE INSTRUCTIONS</u></p> <p>Each bidder must indicate his compliance with these specifications by marking "YES" or "NO" in the appropriate column for each individual paragraph of this specification. Indicating "YES" to a paragraph shall mean full compliance; indicating "NO" shall mean an exception is being taken. Any deviation from the specification, no matter how small, must be so annotated. All exceptions must be fully explained on a separate page, titled "Exceptions", giving reference to the page and paragraph where the exception is being taken. Failure to comply with this requirement shall result in the bid proposal being rejected.</p> <p>The Union County Fire Department shall be the sole arbiter as to what exceptions may be allowed or disallowed. In the event a bidder fails to make any indication of compliance for any or all provisions it will be assumed that the bidder is taking total exception to the specification and the bid shall be disallowed.</p> <p><u>FIRE APPARATUS DOCUMENTATION</u></p> <p>The contractor shall supply, at the time of delivery, at least one (1) copy of the following documents:</p> <p>The manufacturer's record of apparatus construction details, including the following information:</p> <ul style="list-style-type: none"> • Owners name and address • Apparatus manufacturer, model and serial number • Chassis make, model and serial number 			
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<ul style="list-style-type: none"> • Front tire size and total rated capacity in pounds • Rear tire size and total rated capacity in pounds • Chassis weight distribution in pounds with water and manufacturer mounted equipment, front and rear • Engine make, model, serial number, rated horsepower, rated speed and governed speed • Type of fuels and fuel tank capacity • Electrical system voltage and alternator output in amps. • Battery make, model and total capacity in cold crank amps (CCA) • Transmission make, model and serial number. If so equipped chassis transmission PTO(s) make, model and gear ratio • Pump make, model, rated capacity in gallons per minute (liters per minute where applicable) and serial number • Pump transmission make, model, serial number and gear ratio • Auxiliary pump make, model, rated capacity in gallons per minute (liters per minute where applicable) and serial number • Water tank certified capacity in gallons or liters • Paint manufacturer and paint number(s) • Company name and signature of responsible company representative • Certification of slip resistance of all stepping, standing and walking surfaces. <p>If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of suction capability.</p> <p>If the apparatus has a fire pump or an industrial supply pump, a copy of the apparatus manufacturer's approval for stationary pumping applications.</p> <p>If the apparatus has a fire pump or an industrial supply pump, the engine manufacturers certified brake horsepower curve for the engine furnished, showing the maximum governed speed.</p> <p>If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of hydrostatic test.</p> <p>If the apparatus has a fire pump or an industrial supply pump, the Underwriters Laboratory certification of inspection and test for the fire pump (if applicable).</p> <p>Weight documents from certified scale - showing actual loading on the front axle, rear axle(s) and overall vehicle (with the water tank full but without personnel, equipment and hose) shall be supplied with the complete vehicle to determine compliance with NFPA-1901.</p> <p>Written load analysis and results of electrical performance tests.</p> <p>If the apparatus is equipped with a water tank, the certification of water tank capacity by the tank manufacturer.</p> <p>The chassis shall be certified by the apparatus manufacturer as conforming to all applicable Federal Motor Vehicle Safety Standards in effect at the date of contract. This shall be attested to by the attachment of a FMVSS certification label on the vehicle by the contractor who shall be recognized as the responsible final manufacturer.</p> <p><u>VEHICLE RECORDS</u></p> <p>The successful bidder shall be responsible for preparing and maintaining a record file of parts and assemblies used to manufacture the apparatus. These records shall be maintained in the factory of the bidder for a minimum of twenty (20) years.</p>		
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<p>File shall contain copies of any and all reported deficiencies, all replacement parts required to maintain the apparatus, and original purchase documents including specifications, contract, invoices, incomplete chassis certificates, quality control reports and final delivery acceptance documents. The Union County Fire Department shall have access to any and all documents contained in this file upon official written request.</p> <p><u>BIDDER INSTRUCTIONS</u></p> <p>Bids shall be addressed and submitted in accordance with the advertised "Bid Notice". The words "Fire Apparatus Bid", the date, and the bid opening time must be stated on the face of the bid envelope. It is the bidder's responsibility to see that their proposals arrive on time. Late proposals, telegram, facsimile or telephones bids shall not be considered.</p> <p>Each bid shall be accompanied by a detailed description of the apparatus and equipment it proposes to furnish. It is the intent of these specifications to cover the furnishing and delivery of a complete and soundly engineered apparatus equipped as specified. Minor details of construction and materials, where not otherwise specified, are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features.</p> <p>Brand names or model numbers have been specified for some items. These have been carefully selected because of their reliability and availability for replacement locally. In order to be most responsive, items named, or an item "equal to" the particular item specified by brand name or model, should be contained in the bid proposal. It is the bidder's responsibility to prove to the Union County Fire Department that an item bid as "equal to" a particular specified item, is truly of equal quality, design, and function. The Union County Fire Department maintains the right to make a final decision as to the acceptability of an item bid as "equal to" a particular specified item.</p> <p>No exception shall be allowed for any of the aforementioned instructions. Bids not submitted in accordance with these instructions shall be rejected.</p> <p><u>TIMELY PROPOSALS</u></p> <p>It is the bidder's responsibility to see that their proposals arrive on time. Late proposals, facsimiles, telegrams, or telephone bids shall not be considered.</p> <p><u>GENERAL CONSTRUCTION</u></p> <p>The complete apparatus, assemblies, subassemblies, component parts, etc., shall be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subject. All parts of the apparatus shall be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in firefighting service. All parts of the apparatus shall be strong enough to withstand general service under full load. The apparatus shall be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair. Bidder's specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901; Underwriters Laboratories, Inc.; and all State and Federal Department of Transportation vehicle regulations at time of sale of unit.</p> <p>The apparatus shall be designed and constructed, and the equipment so mounted, with due consideration to distribution of the load between front and rear axles that all specified equipment, including a full complement of specified ground ladders, full water tank, loose equipment, and firefighters shall be carried without overloading or injuring the apparatus.</p> <p><u>PRODUCT LIABILITY INSURANCE</u></p> <p>Each bidder shall supply proof of product liability and facility insurance equal to or exceeding \$30,000,000.00. This shall be provided as part of the proposal.</p>		
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<p><u>ADDENDA AND INTERPRETATIONS</u></p> <p>No interpretation of the meaning of the specifications or other contract documents shall be made to any Bidder verbally. Every request for such interpretation shall be in writing and addressed to the Purchaser, and must be received at least ten days prior to the date fixed for the opening of the bids to be given consideration. Any and all such interpretations and any supplemental instructions shall be in the form of written addenda to the specifications which, if issued, shall be mailed by certified mail to all prospective Bidders not later than five days prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addendum or interpretation shall not relieve any Bidder from any obligation under his bid as submitted. All addenda so issued become a part of the contract documents.</p> <p><u>PAINT PERFORMANCE CERTIFICATION</u></p> <p>The finish paint shall be certified by the apparatus manufacturer as conforming to all applicable Commercial Vehicle Paint Standards in effect at the date of contract. This shall be attested to by the attachment of a PPG certification.</p> <p><u>SERVICE CENTER AND PARTS DEPOT</u></p> <p>The successful bidder shall have an authorized service center, with a staff of factory-trained mechanics, well versed in all aspects of service for all major components, of the apparatus within a 300-mile radius of the Union County Fire Department. In addition, the bidder shall maintain a separate service facility at the manufacturing site, in order to satisfy the need for possible major emergency service work.</p> <p><u>SPECIAL CONDITIONS</u></p> <p>No bid shall be considered unless the bidder can meet the special conditions stated herein.</p> <p>The complete apparatus must be manufactured in the United States of America.</p> <p><u>PRICES AND PAYMENTS</u></p> <p>The bid price shall be F.O.B. Destination, on a delivered and accepted basis at the Fire Department.</p> <p>Total price on bidder's proposal sheet must include all items listed in these specifications. Listing any items contained in the specification as an extra cost item, unless specifically requested to do so in these specifications, shall automatically be cause for rejection.</p> <p>Bidder shall compute pricing less federal and state taxes. It is understood that any applicable taxes shall be added to the proposed prices, unless the purchaser furnishes appropriate tax-exempt forms.</p> <p><u>BID EVALUATION</u></p> <p>Purchaser, Fire Chief and Purchasing Agent shall evaluate bids received. This evaluation shall be based as a minimum on the following criteria:</p> <ul style="list-style-type: none"> • Commitment for expedient delivery. • Commitment to the general conditions contained herein, including warranty. • Completeness of the proposal, i.e. the degree that it responds to all requirements and requests for information contained herein. • Manufacturing and delivery schedule. • Contractor's demonstrated capabilities and qualifications. 		
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Complies

Yes No

- Equipment suppliers and/or local representative's demonstrated capabilities and qualifications.

EXCEPTIONS TO SPECIFICATIONS

Exceptions shall be referenced to the paragraph and page of these specifications where the item appears. Drawings, photographs, and technical information about the exception shall be included as necessary. Any exceptions may be considered during the evaluation process, and the decision shall be final.

Proposals taking total exceptions to specifications shall not be accepted.

"OR APPROVED EQUAL" CLAUSE

The mention in the specifications of apparatus, equipment or material by brand name or by such specified description of same as is hereby made, is intended to convey to the bidder's understanding, the degree of excellence required. Any article, equipment, or material, which shall conform to the standards and excellence so established, and is of equal merit, strength, durability and appearance to perform the desired function, is deemed eligible for offer as a substitute. The qualifications of the offering shall be judged as to their conformance with these specifications. Any equipment offered other than herein specified shall be subject to a competitive demonstration and evaluation shall be subject to a competitive demonstration and evaluation by the using department; Such demonstration to be provided on request within ten working days after the receipt of bids.

The result of that demonstration and evaluation shall be of prime importance in the recommendation to the governing body for the final contract award.

TECHNICAL INFORMATION

Bidder shall furnish free of charge, upon request, technical information, graphs, charts, photographs, engineering diagrams, steering geometry, drive train certifications, instruction guides, or other documentation as requested to show that the equipment offered fully complies with these specifications.

PROPRIETARY PARTS

It is the intention of the Purchaser for all bidder's to furnish the apparatus with major parts commonly used by the heavy-duty truck manufacturers and open market vendors whereas replacement parts are more readily available and at reduced cost. The use of proprietary parts such as but not limited to axles, suspensions, engines, transmissions, frontal air bags, electronic controls, multiplexing systems, seats, pumps, gauges, foam systems, etc., may not be acceptable by the purchaser.

DELIVERY TIME

Each bidder shall state the completed apparatus delivery time based on the number of calendar days, starting from the date the commercial chassis is received by the apparatus manufacturer.

Delivery Time: _____ Calendar days

BOND REQUIREMENTS

Any bonds or sureties (bid, performance, or other) required by the Purchasing Organization shall be as specified below or as requested in the advertised "Bid Notice".

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<p>A bid bond shall be submitted with the bidder's proposal. The bond shall be for an amount equal to 10% of the proposed bid price. Failure to provide an original, acceptable, valid bid bond with the proposal shall result in the immediate rejection of the bidder's proposal.</p> <p>The apparatus manufacturer must provide all bonds; bonds provided by a sales representative, dealer, distributor, or agent of the apparatus manufacturer, are not acceptable.</p> <p>With respect to the qualifications of proposed bonds or sureties, the bidder's bonding company must meet the following requirements:</p> <ul style="list-style-type: none"> • An acceptable surety as outlined by the department of treasury on their most recent federal register at a limit of at least \$10,000,000; • A.M. Best rating of "A" or better with a financial rating of at least "VIII"; and licensed as a surety in the state where the sale is to be made. <p><u>FAIR, ETHICAL AND LEGAL COMPETITION</u></p> <p>In order to ensure fair, ethical, and legal competition, neither original equipment manufacturer (O.E.M.) nor parent company of the O.E.M. shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.</p> <p><u>NON-COLLUSIVE BIDDING CERTIFICATION</u></p> <p>By submission of this bid, each bidder and each person signing on behalf of any bidder, certifies, and in the case of a joint bid, each party thereof certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief:</p> <ul style="list-style-type: none"> • The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for purpose of restricting competition, as to any matter relating to sale price with any other bidder or any competitor. • Unless otherwise required by law, the prices that have been quoted in this bid have not been knowingly disclosed by the bidder and shall not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor. • No attempt has been made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition. • That all requirements of the law including amendatory provisions as to non-collusive bidding have been complied with. <p><u>MATERIAL AND WORKMANSHIP</u></p> <p>All equipment furnished shall be guaranteed to be new and of current manufacture, to meet all requirements of these specifications.</p> <p>All workmanship shall be of high quality and accomplished in a professional manner so as to insure a functional apparatus with a pleasing, aesthetic appearance.</p> <p><u>CONTRACT AWARD</u></p> <p>The Purchaser reserves the right to reject any or all bids deemed to be unresponsive. The Purchaser also reserves the right to waive any informalities, irregularities and technicalities in procedure.</p> <p>The Purchaser reserves the right, before awarding the contract, to require a bidder to submit evidence of his qualifications as may be deemed necessary. Documentation, which may be required, is financial soundness, technical competency, and other pertinent qualifications of a bidder, including past performance (experience) with the Purchaser.</p>		
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<p>Upon award of contract, the sales contract shall be between the Purchaser and the manufacturer of the apparatus. Contracts between the Purchaser and a sales representative, dealer, distributor, or agent of the apparatus manufacturer shall not be acceptable. (No Exceptions.)</p> <p>The contract shall be valid for a period of five (5) years. Price increases will be calculated by using the US Department of Labor's Producer Price Index (PPI) data for trucks and truck tractors (336120-2) as well as buses and firefighting vehicles (336120-3) in conjunction with significant changes in major component or raw material costs or specification changes due to regulatory updates that include but are not limited to FMVSS, DOT, NFPA or EPA guidelines. The PPI is one of the oldest and continuous systems of statistical data published by the Bureau of Labor Statistics as well as one of the oldest economic times series compiled by the Federal Government. It is utilized as a fair and balanced method for support of annual increases for long term contracts for manufactured goods.</p> <p><u>APPROVAL DRAWING</u></p> <p>A detailed drawing of the apparatus shall be provided to the purchaser for approval before construction begins. A copy of this drawing shall also be provided to the manufacturer's representative. Upon purchaser's approval, the finalized drawing shall become a part of the total contract.</p> <p>The drawing shall show, but is not limited to, such items as the chassis make and model, major components, location of lights, sirens, all compartment locations and dimensions, special suctions, discharges, etc. The drawing shall be a visual interpretation of the apparatus as it is to be supplied.</p> <p><u>INSPECTION VISITS</u></p> <p>The successful bidder shall provide one (1) factory inspection trip to the apparatus manufacturer's facility. Transportation, meals, lodging, and other requisite expenses shall be the bidder's responsibility.</p> <p>Accommodations shall be for three (3) Fire Department representatives per trip.</p> <p>The factory visits shall occur at the following stages of production of the apparatus:</p> <ul style="list-style-type: none"> • Final inspection upon completion. <p>Travel arrangements greater than 300 miles from the manufacturing facility shall be via commercial airline transportation.</p> <p>The Union County Fire Department maintains the right to inspect the apparatus, within normal business hours, at any other point during construction. Expenses incurred during non-specified inspection visits shall be the responsibility of the Union County Fire Department.</p> <p>During inspection visits, the Union County Fire Department reserves the right to conduct actual performance tests to evaluate completed portions of the unit. Testing shall be accomplished with the assistance and resources of the contractor.</p> <p><u>INSTRUCTION MANUALS/DRAWINGS, SCHEMATIC</u></p> <p>In accordance with standard commercial practices, applicable to each vehicle (including body and special equipment) furnished under the contract, the following listed manuals and schematics, in the quantity specified, shall be provided at time of delivery of each vehicle.</p> <p>The contractor shall supply at time of delivery, two (2) CD copies of a complete operation and service manual covering the complete apparatus as delivered and accepted.</p>		
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<p>The manual shall contain the following:</p> <ul style="list-style-type: none"> • Descriptions, specifications, and ratings of chassis, pump (if applicable), and aerial device. • Wiring diagrams. • Lubrication charts. • Operating instructions for the chassis, any major components such as a pump and any auxiliary systems. • Instructions regarding the frequency and procedures recommended for maintenance. • Parts replacement information. <p><u>VEHICLE FLUIDS PLATE</u></p> <p>As required by NFPA-1901, the contractor shall affix a permanent plate in the driver's compartment specifying the quantity and type of the following fluids used in the vehicle:</p> <p>A permanent plate in the driving compartment shall specify the quantity and type of the following fluids used in the vehicle:</p> <ul style="list-style-type: none"> • Engine oil • Engine coolant • Chassis transmission fluid • Pump transmission lubrication fluid • Pump primer fluid • Drive axle(s) lubrication fluid • Air-conditioning refrigerant • Air-conditioning lubrication oil • Power steering fluid • Cab tilt mechanism • Transfer case fluid • Equipment rack fluid • Air compressor system lubricant • Generator system lubricant • Aerial systems <p><u>PRINCIPAL APPARATUS DIMENSIONS & GVWR</u></p> <p>The bidder shall include the principal dimensions, front G.A.W.R., rear G.A.W.R., and total G.V.W.R. of the proposed apparatus. Additionally, the bidder shall provide a weight distribution of the fully loaded, completed vehicle; this shall include a filled water tank, specified hose load, miscellaneous equipment allowance in accordance with NFPA-1901 requirements, and an equivalent personnel load of 250 lbs. per seating position.</p> <p><u>BIDDER TO SUPPLY AND FILL- IN PROPOSED DIMENSIONS:</u></p> <ul style="list-style-type: none"> • OVERALL LENGTH: _____" • OVERALL WIDTH: _____" • OVERALL HEIGHT: _____" • WHEELBASE: _____" 			
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<p>The axle and total weight ratings of the completed apparatus shall not be less than the following minimum acceptable weight ratings:</p> <ul style="list-style-type: none"> MINIMUM FRONT G.A.W.R.: _____ lbs. MINIMUM REAR G.A.W.R.: _____ lbs. MINIMUM TOTAL G.V.W.R.: _____ lbs. <p><u>BIDDERS BACKGROUND</u></p> <p>All bidders shall state the ownership of the organization which shall actually construct the apparatus. Companies which are a division, subsidiary, wholly or partially owned subsidiary or other entity which is wholly or partially owned or controlled by another entity shall state their entire ownership lineage. Bidders from such organizations must have the bid signed by the chief executive of the parent entity.</p> <p><u>PRIMARY PLANT CONSTRUCTION</u></p> <p>In order to insure top quality construction, maximum assembly line and engineering communication and the highest level of manufacturing supervision the entire apparatus shall be built at the bidders' primary (headquarters) manufacturing facility. Apparatus constructed at satellite plants will not be considered.</p> <p><u>REQUIRED PROPOSAL BLUEPRINT</u></p> <p>A 24" x 36" scale drawing of the specific apparatus being proposed shall be submitted WITH THE BID. Drawings of similar units or demo units shall not be permitted. Bidders should be clear that this provision is requiring a SCALE drawing of the truck which is actually being bid. The drawing shall be done at the manufacturer's facility by the manufacturer's engineering department in order to guarantee the accuracy of the drawing. Failure to comply with this requirement shall be grounds for rejection of the bid!</p> <p><u>BODY CONSTRUCTION LIMITATIONS</u></p> <p>Apparatus bodies which are either bolted together or make excessive use of adhesives shall not be considered. Similarly, body construction techniques which rely upon space consuming extrusions for structural support shall not be permitted.</p> <p><u>FAMA COMPLIANCE</u></p> <p>The apparatus manufacturer must be a current member of the Fire Apparatus Manufacturer's Association (FAMA).</p> <p><u>U.S.A. MANUFACTURER</u></p> <p>The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service.</p> <p><u>QUALITY MANAGEMENT</u></p> <p>The manufacturer shall operate a Quality Management System that is certified to ISO 9001 by an organization that is accredited by the ANSI-ASQ National Accreditation Board (ANAB).</p>		
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<p>This type of business management system shall allow the manufacturer to monitor processes to ensure they are effective; keep adequate records; check output for defects, with appropriate and corrective action where necessary; regularly review individual processes and the quality system itself for effectiveness; and facilitate continual improvement.</p> <p>A copy of the registration certificate must be included in the proposal, NO EXCEPTIONS.</p> <p><u>TABLE OF CONTENTS</u></p> <p>As all manufacturers present their specifications in a different order, each manufacturer shall provide a table of contents for ease of bid comparison and to clearly locate all proposed items.</p> <p><u>STEPPING, STANDING, & WALKING SURFACES</u></p> <p>All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be Alcoa No-Slip type. This material shall be a minimum 3/16 (0.1875") in thickness. Upon request by the purchaser, the manufacturer shall supply proof of compliance with this requirement. All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance.</p> <p><u>AMP DRAW REPORT</u></p> <p>The bidder shall provide with their bid proposal and at the time of delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.</p> <p>A written load analysis, which shall include the following:</p> <ul style="list-style-type: none"> • The rating of the alternator. • The minimum continuous load of each component that is specified per: Applicable NFPA-1901. • Additional loads that, when added to the minimum continuous load, determine the total connected load. • Each individual intermittent load. <p>All of the above listed items shall be provided by the bidder per the applicable NFPA-1901.</p> <p><u>COOPERATIVE PURCHASING</u></p> <p>The Manufacturer shall be pleased to allow other public agencies to use the purchase agreement resulting from this invitation to bid unless the bidder expressly notes on the proposal form that prices are not available for tag-on. The condition of such use by other agencies shall be that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with the successful bidder. Such tag-ons shall be done so that the original purchasing agency has no responsibility for performance by either the manufacturer or the agency using the contract.</p> <p><u>UNDERWRITERS LABORATORIES INC. (UL) EXAMINATION AND TEST PROPOSAL</u></p> <p>If required by the specific chapters of NFPA-1901, the proposed unit shall be tested and certified by Underwriters Laboratories Inc. (UL) Underwriters Laboratories Inc. (UL) is recognized worldwide as a leading third party product safety certification organization for over 100 years. UL has served on National Fire Protection Association (NFPA) technical committees for over thirty years.</p>		
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Yes No

INDEPENDENT TESTING ORGANIZATION QUALIFICATIONS

- UL is a nationally recognized testing laboratory recognized by OSHA.
- UL complies with the American Society for Testing and Materials (ASTM) Standard ASTM E543 "Determining the Qualifications for Nondestructive Testing Agencies."
- UL has more than 40 years of automotive fire apparatus safety testing experience and 16 years of factory aerial device testing and Certification experience. UL has more than 100 years of experience developing and implementing product safety standards.
- UL does not represent, is not associated with, nor is in the manufacture or repair of automotive fire apparatus.
- All test work for fire pumps outlined in NFPA 1901, Edition shall be conducted.
- UL has included a list of all factory aerial device manufacturers for whom testing is currently being conducted on a regular basis.
- UL carries ten million dollars in excess liability insurance for bodily injury and property damage combined.

UL provides the manufacturer a complete written examination and test report for each inspection performed at the manufacturer's facility. This report specifies the points of inspection and results of such examinations and tests.

The UL inspectors performing the test work on the units are certified to Level II in the required NDT methods, under the requirements outlined in ASNT document CP-189.

The actual person(s) performing the inspection shall present for review proof of Level II Certification in the required NDT methods.

The apparatus manufacturer shall designate, in writing, who is qualified to witness and certify these test results.

Prior to submittal to the automotive fire apparatus manufacturer, the final Report shall be reviewed by the Supervisor of Fire Equipment Services and a Registered Professional Engineer, both of whom are directly involved with the aerial device certification program at UL.

When the unit successfully meets all the requirements outlined in NFPA 1901, 2009 Edition, UL shall issue a Certificate of Automotive Fire Apparatus Examination and Test stating the unit's compliance with NFPA- 1901.

GENERAL APPARATUS DESCRIPTION "PUMPER"

The unit shall be designed to conform fully to the "Pumper Fire Apparatus" requirements as stated in the NFPA 1901 Standard (2009 Revision), which shall include the following required chapters as stated in this revision:

- Chapter 1 Administration
- Chapter 2 Referenced Publications
- Chapter 3 Definitions
- Chapter 4 General Requirements
- Chapter 5 Pumper Fire Apparatus
- Chapter 12 Chassis and Vehicle Components
- Chapter 13 Low Voltage Electrical Systems and Warning Devices
- Chapter 14 Driving and Crew Areas
- Chapter 15 Body, Compartments and Equipment Mounting
- Chapter 16 Fire Pumps and Associated Equipment
- Chapter 18 Water Tanks

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<u>CAB SAFETY SIGNS</u> The following safety signs shall be provided in the cab: <ul style="list-style-type: none"> • A label displaying the maximum number of personnel the vehicle is designed to carry shall be visible to the driver. • "Occupants will be seated and belted when apparatus is in motion" signs shall be visible from each seat. • "Do Not Move Apparatus When Light Is On" sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section). • A label displaying the height, length, and GVWR of the vehicle shall be visible to driver. • This label shall indicate that the fire department will revise the dimension if vehicle height changes while vehicle is in service. 			
<u>CHASSIS DATA LABELS</u> The following information shall be on labels affixed to the vehicle: <p>Fluid Data</p> <ul style="list-style-type: none"> • Engine Oil • Engine Coolant • Chassis Transmission Fluid • Pump Transmission Lubrication Fluid • Pump Primer Fluid (if applicable) • Drive Axle(s) Lubrication Fluid • Air Conditioning Refrigerant • Air Conditioning Lubrication Oil • Power Steering Fluid • Cab Tilt Mechanism Fluid • Transfer Case Fluid (if applicable) • Equipment Rack Fluid (if applicable) • Air Compressor System Lubricant • Generator System Lubricant (if applicable) • Front Tire Cold Pressure • Rear Tire Cold Pressure • Aerial Hydraulic Fluid (if applicable) • Maximum Tire Speed Rating <p>Chassis Data</p> <ul style="list-style-type: none"> • Chassis Manufacturer • Production Number • Year Built • Month Manufactured • Vehicle Identification Number <p>Manufacturers weight certification:</p> <ul style="list-style-type: none"> • Gross Vehicle (or Combination) Weight Rating (GVWR or GCWR) • Gross Axle Weight Rating, Front • Gross Axle Weight Rating, Rear 			
COMMERCIAL PUMPER SPECIFICATIONS			

UNION COUNTY FIRE DEPARTMENT

**Bidder
Complies**

Yes No

ROLLOVER STABILITY

The apparatus shall meet the criteria defined in 4.13.1 for rollover stability as defined in the 2009 NFPA Standard for Automotive Fire Apparatus.

2016 KENWORTH T370

Model

T300 Series Conventional

Electric door locks LH/RH; ignition & doors keyed alike; single electric horn; single-piece windshield; electric windshield wipers, 2-speed plus intermittent; electric windshield washers; steering wheel 18 in. 4-spoke; glove box with locking latch; dash-mounted cruise control with switches; turn signal switch with column-mounted dimmer; standard dash panels include gray w/burl wood accents; slate gray interior primary color; dark slate gray seat color; floor mat; inside sunvisor, LH/RH; door courtesy lights; under-dash center console with 1 cup holder, 1 ashtray & 1 lighter.

T370 Class 7: medium-duty conventional

Chassis operation will include

stationary application used in lower 48 states (US Only). Stationary operation is defined as running the engine under load while stationary at a substantial fraction of engine gross horsepower (60% or greater) for an extended period of time (longer than 5-10 minutes).

CARB Idle Emissions Reduction Feature for PX-7 and PX-9

CARB Exempt Application Emergency Vehicle Only

Medium-duty 4x2 automatic

Water

Fire truck service. Vehicles used in fighting

fires. Typically have pumps, etc., mounted in the body. Road usage: minimum 5% Class B and maximum 5% Class D.

Fire truck-pumper

U.S. Domestic Registry, 50-State

Engine & Equipment

PACCAR PX-9 380 2013 380@2000 368@2100 1150@1400

Emergency vehicle includes turbo exhaust brake, no code is used.

Diagnostic plug for data link, oil cooler, aluminum flywheel housing

N09200 N205 120 Standard maximum speed limit [LSL]

N09220 N207 0 Expiration distance

N09240 P09 120 Hard maximum speed limit

N09260 P14 68 Maximum accelerator pedal vehicle speed

N09280 P16 0 Accelerator lower droop

N09300 P19 68 Maximum cruise speed

N09320 C143 0 Cruise control lower droop

N09360 N203 252 Reserve speed function reset distance

N09380 N202 0 Maximum cycle distance

N09400 N206 10 Maximum active distance

UNION COUNTY FIRE DEPARTMENT				Bidder Complies	
				Yes	No
N09420	N201	0	Reserve speed limit offset		
N09440	P11	No	Engine protection shutdown		
N09460	P06	No	Gear down protection		
N09480	P26	1400	Max PTO speed		
N09500	P02	No	Cruise control auto resume		
N09520	P04	No	Auto engine brake in cruise		
N09540	N209	0	Expiration distance		
N09560	P520	Yes	Enable idle shutdown park brake set		
N09580	P32	5	Timer setting		
N09600	P233	Yes	Enable impending shutdown warning		
N09620	P234	60	Timer for impending shutdown warning		
N09640	P516	35	Engine load threshold		
N09680	P33	No	Idle shutdown manual overrule		
N09720	P230	Yes	Enable hot ambient automatic overrule		
N09740	P46	40	Low ambient temperature threshold		
N09760	P56	60	Intermediate ambient temperature threshold		
N09780	P47	80	High ambient temperature threshold		
Prospector version 35.0 supersedes 34.0					
Effective VSL setting NA					
Engine Idle Shutdown Timer Disabled					
Eff EIST NA Expiration Miles					
Use only with MX and Cummins engines					
Air compressor: Cummins 18.7 CFM, Cummins, PACCAR					
PX engines					
Air cleaner: Dry-type firewall mounted w/filter					
restriction indicator					
Air inlet ember separator NFPA compliant for					
fire applications					
Fan hub: Horton 2-speed for ISL9, ISL-G					
PX-8 or PX-9					
Cooling module: 1000 square inches					
T170/T270/T370/T470. Includes metal surge tank on T170/T270/T370					
Bug screen: Front of grille on C500, T800, T880,					
and W900. Behind grille on T660, T680, T700, and T300 (medium duty)					
RH under cab SCR for PX-8, PX-9 w/single					
horizontal tailpipe					
Fleetgurd filter/Water separator FS1003 w/WIF					
(water in fuel) sensor. For PACCAR PX-8/PX-9 or Cummins ISL engines					
Retarder Jacobs for PX-8/9 ISL w/					
3-way switch. Replaces the standard turbo brake for PX-8 engines.					
Alternator: Delco 40SI 320 amp brushless					
with battery voltage sense					
COMMERCIAL PUMPER SPECIFICATIONS					

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>Batteries: 3 PACCAR GP31 threaded post (700) 2100 CCA dual purpose</p> <p>12 volt light system w/circuit protection</p> <p>Starter: PACCAR 12 volt electrical system. w/ centralized power distribution incorporating plug-in style relays. Circuit protection and serviceability, 12 volt light system w/circuit protection circuits number & color coded.</p> <p>Multi-function engine connector for body builder interface for Cummins. T680/T880: This feature is standard, no code required.</p> <p>Body builder harness to EOF for customer installed remote throttle control. This does not include J1939 harness for communicating with 2010 engines. Requires either code 1900082 or 1900084.</p> <p>Jump start terminals frame mounted BOC below top of frame flange.</p> <p><u>Transmission & Clutch</u></p> <p>Transmission: Allison 3000EVS 5-speed w/PTO drive gear. 5th Gen controls. Includes heat exchanger & oil level sensor. Emergency Vehicle Series for vocational applications. Transynd transmission fluid is standard on all Allison 1000, 2000, 3000 & 4000 series transmissions.</p> <p>Driveline: 3 SPL170XL 2 centerbearing requires 3500057 interaxle driveline</p> <p>Torque converter included w/Allison transmission</p> <p>Auto neutral for Allison--single input</p> <p>Rear transmission support springs for transmission PTO applications are required to ensure that engine flywheel housings are not overloaded when transmission PTO's are installed.</p> <p>Driveline Retarder A Telma electromagnetic, air cooled driveline retarder shall be furnished installed within the driveline of the apparatus. The retarder shall be independently mounted to the chassis frame rails and positioned to provide proper driveline angles and ease in maintenance one the driveline. The retarder shall be sized to the maximum G.V.W.R. of the vehicle. The system {will/shall} have an on/off switch and an indicator light on the dash. The retarder shall automatically disengage when the vehicle is not in motion.</p> <p>Activation of the retarder shall illuminate the vehicle brakes lights. The Telma retarder shall be equipped with an electronic interface to de-activate the retarder anytime the ABS system is activated.</p> <p><u>Front Axle & Equipment</u></p> <p>Dana Spicer E-1462I front axle rated 14.6K 3-1/2 in. drop</p> <p>Front brakes included w/front hub package</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>Front dustshield: for drum brakes; all front axles</p> <p>Air brake: 14,600 lb. package includes Bendix 16-1/2 x 5 brakes, cast drums, aluminum 10-bolt hub pilot LMS hubs, hubcaps, oil seals & automatic slack adjusters. For use w/22-1/2 in. wheels.</p> <p>Front springs: Taperleaf 14.6K w/shock absorbers for use on 2010+ chassis only</p> <p>Single power steering gear: 14.6K TRW TAS85 Use only w/2010+ chassis</p> <p><u>Rear Axle & Equipment</u></p> <p>Single Dana Spicer S30-190 rear axle, 30K</p> <p>Rear axle ratio--5.25</p> <p>Single rear brakes included w/rear hub package</p> <p>26K air brake package includes 16-1/2 x 7 in. brakes, cast drums, iron 10-bolt hub pilot hubs, slack adjusters and oil seals for use w/22.5 in. wheels</p> <p>30K air brake package includes 16-1/2 x 7 in.</p> <p>Dust shields for drum brakes; all rear axles</p> <p>Bendix 4S/4M anti-lock brake system w/air traction control (ATC)</p> <p>Tanker height less than 75 in. from top of frame rail</p> <p>Rear suspension: single Reyco 79KB multileaf 31K. 28K spring plus helper. Laden height 8.9 inches, unladen height 11.7 inches. Not available with shocks or sway bars. Not rear air disc brake compatible.</p> <p>Heavy-duty rear suspension crossmembers for Reyco 79KB replacing T3 standard.</p> <p><u>Tires & Wheels</u></p> <p>Front tires: Michelin XZY-3 12R22.5 16PR 42.9 in. diameter, all position. 20.1 in. SLR.</p> <p>Rear tires: Michelin X Works XDY 315/80R22.5 20PR 43 in. diameter, drive. 20.0 in. SLR.</p> <p>Rear tire quantity: 4</p> <p>Front wheel: Accuride 50344 22.5x8.25 steel Steel Armor [TM] powder coat, hub pilot mount, heavy-duty 5 hand-hole hub pilot mount</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>Rear wheel: Accuride 29300 22.5x9 steel Steel Armor [TM] powder coat, hub pilot mount, 10000 lb. maximum rating. 5-hand holes. Not air disc brake compatible.</p> <p>Powder coat white steel wheel. Use in conjunction with front, dual front, rear, spare or lift axle wheel code(s). All wheels on chassis must have same finish color.</p> <p>Rear wheel/Rim quantity: 4</p> <p><u>Frame & Equipment</u></p> <p>Frame Rails: 10-5/8 x 3-1/2 x 5/16 Steel to 309 in. to 380 in. Truck frame weight is 2.91 lb.-in. per pair of rails. Section modulus is 14.80 cu. in., RBM is 1,776,000 in.-lbs. per rail. 120,000 PSI yield. Heat treated. Frame rail availability may be restricted based upon application, axle/suspension capacity, fifth wheel setting, or component dimensional specifications. The results of the engineering review may result in a change to the requested frame rail. If a change is required Kenworth Application Engineering will advise the dealer of the appropriate material specification for a substitute rail.</p> <p>Full steel insert for 10-5/8 in. or 10-3/4 in. main rail. Insert length is 168-348 in. Adds 1,149,000 in.-lb. to main rail RBM. Insert weight is 2.05 lb.-in. per pair of rails. Insert length is equal to wheelbase plus rear frame cutoff plus 20.7 in. forward of front axle.</p> <p>Bumper: Aerodynamic chrome requires a bumper setting code</p> <p>40.9 in. bumper setting. Requires a bumper code.</p> <p>Removable front tow hooks: 2</p> <p>Frame layout picture to dealer prior to build date. Information only, no changes. This provides basic frame layout illustration in a PDF file. Adobe Reader or other software capable of viewing PDF files is required on your computer. A copy of the frame layout can be obtained once the engineering work has been completed. This drawing will help the body builder define clearance requirements for the chassis.</p> <p>Front mud flaps</p> <p>Battery box: Temporary across the rails</p> <p>Battery box location: BOC across the rails</p> <p>T270/T370 Non-polished 2010 DPF/SCR cover: w/cab access step assembly, RH under</p> <p>One bolted rear cab crossmember: Replacing T3 standard</p> <p>Square end-of-frame w/bolted crossmember non-towing</p> <p><u>Fuel Tanks & Equipment</u></p> <p>Fuel Tank: 56 US gallon 24.5 in. aluminum under replace</p>		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>Small round DEF tank. 11 gallons of useable volume. The DEF tank will be located on the side you specified, but will not be displayed in the Prospector graphic. If you have specific configuration or body builder concerns, please utilize the Custom Frame Layout option. Required capacity is calculated by fuel capacity of the vehicle and will accommodate two diesel re-fillings for every DEF re-filling.</p> <p>Fuel tank steps: 6 in. wide upper & lower F/1 LH under round tank 24.5 in. NFPA Compliant. Includes fuel tank crossbrace.</p> <p>Anti-siphon device swaged in place. For any number of fuel tanks</p> <p>DEF tank location is on the LH.</p> <p>Location: 56 gal fuel tank LH under cab</p> <p><u>Cab & Equipment</u></p> <p>Cab: Curved Glass Conventional Cab includes aluminum & fiberglass fully hucked cap w/all aluminum bulkhead doors & continuous stainless steel piano-style door hinges. Single electric horn standard. Incandescent exterior lights include diagnosable bulb detection and warning. Trailer cable on tractors includes integrity detection. Standard features include multiplex wiring for interior lights, automated pre-trip inspection, short and open check diagnostics. Warning alarm will sound when lights are left on.</p> <p>Hood: Sloped aerodynamic hood includes grill & separate bumper</p> <p>Cab heater: w/integral defrosters & A/C 45,000 btu cab heater. No sleeper heater/AC. Includes 5 mode rotary control. T600 include filter media.</p> <p>Adjustable telescoping tilt steering column</p> <p>Four position ignition switch, keyless Available for fire truck service & EMT/emergency service only</p> <p>Gauge: dash mounted air filter restriction gauge</p> <p>Gauge: air application gauge</p> <p>Gauge: fuel filter restriction gauge</p> <p>KW Driver Information Center: Includes fuel economy, RPM display, trip information, truck information, diagnostics, gear display, alarm clock</p> <p>Instrument package: Includes speedometer, tachometer, fuel gauge, engine coolant temperature gauge, engine oil pressure, voltmeter. Class 8 also includes primary & secondary air reservoir gauges & an air applicaton gauge. DEF level gauge and warning lamp are included with 2010+ engines. Engine hour meter and outside air temperature readouts are standard. Primary read out will be MPH.</p> <p>Full burl wood dash panels, replacing standard</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>Cab interior: Pinnacle. Includes vinyl headliner & cab back panel, slate gray interior, dark slate gray seats, floor mats, LH/RH inside sunvisor & door courtesy lights.</p> <p>Driver seat: Kenworth Air Cushion Plus HB vinyl Standard feature includes 7 in. fore and aft slide adjustment w/isolator, 6-23 degree recline, air suspension with cover, dual armrests, and single chamber air lumbar support. Seat cushion is 20 inches wide w/2-position tilt and 2-position front cushion extension. Seat material has a horizontal stitch pattern and is 2-tone in color. Seat back is carpeted and includes a map pocket. Seat is manufactured by National. Includes inside visor and retractable 3-point matching seat belts.</p> <p>Rider seat: Kenworth Air Cushion Plus HB vinyl Standard feature includes 7 in. fore and aft slide adjustment w/isolator, 6-23 degree recline, air suspension with cover, dual armrests, and single chamber air lumbar support. Seat cushion is 20 inches wide w/2-position tilt and 2-position front cushion extension. Seat material has a horizontal stitch pattern and is 2-tone in color. Seat back is carpeted and includes a map pocket. Seat is manufactured by National. Includes inside visor and retractable 3-point matching seat belts.</p> <p>Driver air seat height limited: NFPA compliant</p> <p>Rider air seat height limited: NFPA compliant</p> <p>NFPA Compliance Kit: Includes seat occupancy sensors. Seat belt switches, VDR & seat sensor harness, reflective labels, and a second copy of operator's manual</p> <p>Driver/Rider seat belts: Red, replace standard. Driver & Rider NFPA compliant. Includes rider bench seat.</p> <p>Kenworth Radio with AM/FM/WB/USB and Bluetooth</p> <p>Under-dash center console: w/2 cup holders, 1 ashtray, 1 lighter, 1 12V outlet & a storage compartment</p> <p>Dome lamp over driver door</p> <p>Self-cancelling turn signal: w/head light dimmer switch</p> <p>Cab access contoured grabhandles, LH/RH</p> <p>LH & RH NFPA compliant grabhandles</p> <p>Grab handle LH inside door frame above dash</p> <p>Grab handle RH inside door frame above dash</p> <p>Daylite door: LH/RH incl. RH peeper window</p> <p>Solenoid, switch & wiring for customer installed air horn on T300 chassis. If the chassis has hydraulic brakes, it will require code 1000307 for Accessory air system for hydraulic brakes.</p> <p>Dual convex mirror 8.5 inch w/offset mounting below regular mirror, and non-heated.</p> <p>Single convex mirror 8-1/2 in. x 4-7/16 in.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>located on rider side, and non-heated.</p> <p>Mirror: Dual Moto heated mirrors 7 in. x 16 in. LH & RH remote controlled. Switch located on door pad.</p> <p>Mirror brackets 8-1/2 ft. load width</p> <p>Rear cab stationary window 17 in. x 36 in.</p> <p>Electric-powered LH & RH door window lifts Switch located on door</p> <p>Exterior aerodynamic sunvisor w/integral marker lights</p> <p><u>Lights & Instruments</u></p> <p>Headlamps: Halogen projector low beam, halogen Complex Reflector High Beam</p> <p>Marker lights: Five aerodynamic mounted in sunvisor</p> <p>Turn signal lights: mounted on fender</p> <p>Combination stop, tail, turn & backup lights RH & LH</p> <p>Daytime running lamps</p> <p>Body builder harness: Provides harness to extend tail, turn, stop & marker light circuits from standard body builder connector BOC to the end-of-frame. There is a plug on the chassis end & the opposite end is just wires.</p> <p>Circuit breakers: Replacing fuses. Does not apply to any 5-amp fuse box position. Breakers include stop/brake/turn, tail lamp, high & low beams, marker/clearance lamps, horn, fuel heat, gauges, wipers, air dryer, HVAC controls, panel lamps. Some circuits will remain fuses.</p> <p><u>Air Equipment</u></p> <p>Air Dryer: Bendix AD-IS heated</p> <p>Locate air dryer inside LH rail BOC.</p> <p><u>Extended Warranty</u></p> <p>Severe Service Medium-Duty Warranty: 1-year/50,000 miles</p> <p><u>Miscellaneous</u></p> <p>Warning triangle reflector kit: Shipped loose. Kit consists of 3 triangles in plastic carrying case. Not floor mounted.</p> <p>One 5 lb. dry chemical type fire extinguisher mounted outboard of driver seat. Class ABC</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT				Bidder Complies	
				Yes	No
<u>Paint</u>					
Paint color number					
N97020	A	Z990EB	Unpublished P		
N97400	Sunvisor	Z9990EB	Unpublished P		
N97200	Frame	N0001EA	Black		
N97150	Fender	Z9990EB	Unpublished P		
Paint front wheels to match cab					
Paint rear wheels to match cab--single rear axle					
Bumper unpainted					
Imron solid 1 color non-sleeper Spec A					
Non-standard paint color					
Base coat/clear coat					
The Kenworth Color Selector contains additional instructions, as well as information on Kenworth paint guidelines and surface finish applications. Kenworth is standard with Dupont Imron Elite paint.					
<u>EMBER SEPARATOR</u>					
An air inlet shall be equipped with a stainless mesh screen for separating water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element.					
<u>SEAT BELT CLARIFICATION</u>					
Red seat belts shall be provided if available from the chassis manufacturer.					
<u>BUMPER EXTENSION</u>					
A 12" high, 96" wide, two (2) ribbed, bright finish stainless steel front bumper shall be provided. The front bumper shall be extended approximately twelve (12) inches. A bright aluminum tread plate (3/16") gravel shield with end caps shall be installed.					
<u>WHEEL INSERTS</u>					
A set of four (4) stainless steel full wheel inserts, including lug nut covers, shall be installed on the single rear axle chassis.					
<u>FUEL TANK TREAD PLATE</u>					
The step type fuel tank shall be overlaid with polished aluminum tread plate. This shall include the top, front and both ends. Step areas shall be provided for access to the cab. Step areas shall be fabricated from Alcoa "No-Slip" tread plate.					
<u>BATTERY BOX TREAD PLATE</u>					
The battery box shall be overlaid with polished aluminum tread plate. The cover of this box shall be easily removable for inspection of the batteries.					
COMMERCIAL PUMPER SPECIFICATIONS					
Page 21					

<div> <div>UNION COUNTY FIRE DEPARTMENT</div> </div>	Bidder Complies	
	Yes	No
<div> <div>ROLL OUT TRAY</div> <p>A roll out tray lined with Dri-Deck matting in the battery box shall be furnished.</p> </div> <div> <div>CENTER CONSOLE</div> <p>A center console fabricated from 1/8" aluminum shall be furnished and shall be located between the driver and officer's seats.</p> <p>The forward area of the console shall have a mounting surface for emergency lighting switch panels and/or electronic siren control boxes within reach of the driver or officer. In addition, the console shall be equipped with two (2) map/notebook storage pockets at the rear of the console.</p> <p>The console shall be finished with a brushed aluminum finish.</p> <p>Console dimensions are may vary based on the commercial cab model.</p> </div> <div> <div>REAR EXTERIOR WALL</div> <p>The rear exterior wall of the cab shall be overlaid with polished aluminum tread plate from the walkway up to the bottom of the rear cab window, for scuff protection.</p> </div> <div> <div>ANTENNA INSTALLATION</div> <p>One (1) antenna mounting base(s) model #MATM with 17' of coaxial cable shall be provided and installed on the cab roof. The attached antenna wire(s) shall be run to the center console.</p> <p>The Fire Department is responsible to have the correct antenna whip installed once the apparatus is delivered.</p> </div> <div> <div>TIRE CHAINS</div> <p>One (1) set of On Spot tire chains for a single axle chassis shall be installed. A switch located in the master light console shall control the On Spot chains.</p> </div> <div> <div>TIRE PRESSURE MONITORING DEVICES</div> <p>Each tire shall be equipped with an LED tire alert pressure management system (Vecsafe equal) that shall monitor tire pressure. A chrome plated brass sensor shall be provided on the valve stem of each tire.</p> <p>The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 20 and 120 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 8 psi.</p> <p>Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start blinking.</p> </div> <div> <div>PUMP SHIFT CONTROL</div> <p>The pump shift control and pump engaged indicator light shall be mounted in the driver's lower left panel. This control shall be equipped with a mechanical type lock to prevent inadvertent activation or de-activation. The lever positions and indicator light shall be clearly marked.</p> </div>		
<div> <div>COMMERCIAL PUMPER SPECIFICATIONS</div> </div>		

UNION COUNTY FIRE DEPARTMENT		Bidder Complies	
		Yes	No
***** CHASSIS/BODY ELECTRICAL & ACCESSORIES *****			
<u>COMMERCIAL CHASSIS ELECTRICAL SYSTEM</u>			
<p>The commercial chassis electrical system shall be provided as furnished by the original manufacturer. A customized interface shall be provided and designed, so as not to disturb any of the required chassis functions. The necessary interfaces shall only be provided in areas where load management is allowed or with accessory components provided on the chassis.</p>			
<u>12 VOLT ELECTRICAL SYSTEM TESTING</u>			
<p>The apparatus low voltage electrical system shall be tested and certified by the manufacturer. The certification shall be provided with the apparatus. All tests shall be performed with air temperature between 0°F and 100°F.</p>			
<p>The following three (3) tests shall be performed in order. Before each test, the batteries shall be fully charged.</p>			
<u>TEST #1-RESERVE CAPACITY TEST</u>			
<p>The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for 10 minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a test failure.</p>			
<u>TEST #2-ALTERNATOR PERFORMANCE TEST AT IDLE</u>			
<p>The minimum continuous electrical load shall be activated with the engine running at idle speed. The engine temperature shall be stabilized at normal operating temperature. The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.</p>			
<u>TEST #3-ALTERNATOR PERFORMANCE TEST AT FULL LOAD</u>			
<p>The total continuous electrical load shall be activated with the engine running up to the engine manufacturers governed speed. The test duration shall be a minimum of 2 hours. Activation of the load management system shall be permitted during this test. However, an alarm sounded due to excessive battery discharge, as detected by the system, or a system voltage of less than 11.7 volts DC for a 12 volt system, for more than 120 seconds, shall be considered a test failure.</p>			
<u>LOW VOLTAGE ALARM TEST</u>			
<p>Following completion of the preceding tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm is activated.</p>			
<p>The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts shall be considered a test failure. The battery system shall then be able to restart the engine.</p>			
<p>At time of delivery, documentation shall be provided with the following information:</p>			
<ul style="list-style-type: none"> • Documentation of the electrical system performance test • A written load analysis of the following; • Nameplate rating of the alternator 			
COMMERCIAL PUMPER SPECIFICATIONS		Page 23	

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • Alternator rating at idle while meeting the minimum continuous electrical load • Each component load comprising the minimum continuous electrical load. • Additional loads that, when added to the minimum continuous load, determine the total connected load. • Each individual intermittent load. <p><u>ELECTRICAL MANAGEMENT SYSTEM</u></p> <p>A Class 1 ES-Key Electrical Management System shall be utilized on the chassis for all functions applicable. The system shall consist of the following components:</p> <p>The High Density I/O Node (Super Node) shall have the ability to perform the following functions:</p> <ul style="list-style-type: none"> • A modem with a RS232 computer interface and standard telephone jack used to not only program the multiplex system but also serve as a factory direct gateway into the vehicle from any Class 1 multiplex authorized service facility. • A Universal System Manager (USM), which acts as the main controlling component of the multiplexing system shall be provided and factory programmed to DOT, NFPA, SAE, the manufacturer and Union County Fire Department specifications. The programming shall be done by the manufacturer's engineering department. The ES-Key system installation shall comply with SAE J 551 requirements regarding Electromagnetic and Radio Frequency interference (EMI, RFI), as well as utilize components and wiring practices that insure the system is protected against corrosion, excessive temperatures, water, excessive physical, and vibration damage by any equipment installed on the vehicle at the time of delivery. • A series of Multiplexing Input/Output jacks shall be provided. The Input/Output jacks shall permit the multiplexing system to reduce the amount of wiring and components used as compared to non-multiplexed apparatus. These jacks shall vary in I/O configuration and shall possess individual output internal circuit protection. <p>The System shall also consist of a Smart Programmable Switch (SPS) panel that shall be installed and allow the operator to control the programmed functions of each individual switch.</p> <p>Diagnostic software shall be provided to download data from the on board ES-KEY system. This software shall have the ability to view system input/output (I/O) information, and include a connection from a computer to the vehicle.</p> <p><u>CHASSIS DIAGNOSTICS SYSTEM</u></p> <p>Diagnostic ports shall be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches shall allow engine and ABS systems to provide blink codes should a problem exist.</p> <p>The diagnostic system shall include the following:</p> <ul style="list-style-type: none"> • A single port to monitor the engine, transmission and ABS system and diagnostics of the roll sensor (if applicable) • Engine diagnostic switch (blink codes) • ABS diagnostic switch (blink codes) • Allison Transmission Codes (through touch pad shifter) 		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>BATTERY DISCONNECT SWITCH</u></p> <p>The chassis batteries shall be wired in parallel to a single 12 volt electrical system, controlled through a heavy duty master disconnect switch. The master disconnect switch shall be located within easy access of the driver upon entering or exiting the cab.</p> <p><u>120 VOLT SHORELINE CONNECTION- "SUPER" AUTO EJECT</u></p> <p>One (1) Kussmaul "Super" Auto Eject model 091-55-20-120, automatic, 120 volt, 20 amp shoreline disconnect shall be provided for the on board, 110 volt battery charging systems.</p> <p>The disconnect shall be equipped with a NEMA 5-20 P male receptacle, which shall automatically eject the shoreline when the vehicle starter is energized. The mating connector shall be included with the auto eject and shall be provided as loose equipment. A label shall be provided indicating voltage and amperage ratings.</p> <p><u>SHORELINE POWER INLET PLATE</u></p> <p>A shoreline power receptacle information plate shall be permanently affixed at or near the power inlet. The plate shall indicate the following:</p> <ul style="list-style-type: none"> • Type of Line Voltage • Current Rating in Amps Power Inlet Type (DC or AC). <p>The Kussmaul auto-eject connection shall be equipped with a Red weatherproof cover.</p> <p>The shoreline receptacle shall be located in the driver's cab step well.</p> <p><u>BATTERY CHARGER / AIR COMPRESSOR SYSTEM</u></p> <p>A Kussmaul model # 091-9-12V-1200, "Pump Plus 1200" air compressor/high output battery charger shall be provided for maintaining the vehicle's air / battery system. Unique electronic sensing circuits sense the true battery voltage while eliminating the need for external sense wires. Output current shall be 40 amperes @ 12 volt DC.</p> <p>The air compressor shall maintain the air pressure in the chassis air brake system while the vehicle is not in use. The air compressor shall have a rated input at 12 volt DC @ 12 amps and a max output of 100psi.</p> <p>An LED bar graph display shall be located near the shoreline connection to monitor the battery status.</p> <p>A Kussmaul # 091-9-090 Auto Drain ACHP shall be installed to protect the Auto Pump from built up moisture.</p> <p><u>"DO NOT MOVE APPARATUS" WARNING LIGHT WITH AUDIBLE ALARM</u></p> <p>A 1" round, red flashing warning light with an integral audible alarm, shall be functionally located in the cab to signal when an unsafe condition is present such as an open cab door or body compartment door, an extended ladder rack, a deployed stabilizer, an extended light tower or any other device which is opened, extended or deployed which may cause damage to the apparatus if it is moved.</p> <p>This light shall be activated through the parking brake switch to signal when the parking brake is released. This light shall be labeled "DO NOT MOVE TRUCK".</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>12 VOLT ACCESSORY CIRCUIT- CONSOLE</u></p> <p>One (1) dedicated circuit; 12 volt, 40 Amp, power and ground on 3/8 stud and fused at battery shall be provided in the center console. The circuit shall be for future installation of radios or accessories.</p> <p><u>FEDERAL SIGNAL REAR CAMERA SYSTEM</u></p> <p>A Federal Signal model # CAMSET56-NTSC-2 rear vision camera system shall be provided to allow the driver to visually see the rear of the apparatus while in the cab. The system shall include a Federal 5.6" flat panel LCD color monitor mounted adjacent to the driver and a Federal rear vision color camera that shall be mounted at the rear of the vehicle. The system shall also feature a microphone on the camera and speaker built into the monitor.</p> <p>The rear vision camera system shall be wired to automatically activate when the chassis transmission is placed in reverse.</p> <p>The monitor for the rear vision system shall be mounted ceiling of the cab in easy view of the driver.</p> <p><u>DOT MARKER LIGHTS AND REFLECTORS</u></p> <p>Cab marker lights and signaling devices shall be as provided on the commercial chassis cab from the original chassis manufacturer. FMVSS reflectors shall be also be provided as required.</p> <p>Truck-Lite Model # 18 red LED marker lights with integral reflectors shall be provided at the lower side rear, one (1) each side.</p> <p>Truck-Lite # 60115Y yellow LED side marker and turn lights shall be provided on the apparatus lower side, forward of rear axle, one (1) each side if the apparatus is 30' long or longer.</p> <p>Truck-Lite Model #19 red LED clearance lights shall be provided on the apparatus rear upper, one (1) each side at the outermost practical location.</p> <p>Truck-Lite Model # 33740R LED 3-lamp identification bar will be provided on the apparatus rear center. The lights shall be red in color.</p> <p>Truck-Lite # 98034Y yellow reflectors shall be provided on the apparatus body lower side, as far forward and low as practical, one (1) each side if the apparatus is 30' long or longer.</p> <p>Truck-Lite # 98034R red reflectors shall be provided on the apparatus rear, one (1) each side at the outermost practical location.</p> <p><u>LED LICENSE PLATE LIGHT - REAR</u></p> <p>One (1) Truck-Lite model #15055 LED license plate light shall be provided above the mounting position of the license plate. The light shall be clear in color and shall have a chrome finish.</p> <p><u>TAIL, STOP, TURN AND BACK-UP LIGHTS</u></p> <p>Two (2) Whelen 600 series, 4-1/8" x 6-1/2", LED red combination tail and stop lights, shall be mounted one each side at the rear of the body.</p> <p>Two (2) Whelen 600 series, 4-1/8" x 6-1/2", LED amber arrow turn signal lights, shall be mounted one each side, on a vertical plane with the tail/stop lights.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>Two (2) Whelen 600 series, 4-1/8" x 6-1/2", white halogen back-up lights, shall be mounted one each side on a vertical plane with the turn/tail/stop signals. These lights shall activate when the transmission is placed in reverse gear.</p> <p>Two (2) Whelen PLAST4V mounting flanges, installed one (1) on each side, shall be provided to mount the lights described above in one common mounting flange. The fourth opening shall be for the lower rear warning lights.</p> <p>The lights shall be mounted in order, from top to bottom, as described above.</p> <p><u>BODY STEP LIGHTS</u></p> <p>Chrome plated Trucklite model # 15055, shielded LED body step lights shall be provided and controlled with marker light actuation. Step lights shall be located to properly illuminate all body access steps and walkway areas.</p> <p><u>DUNNAGE AREA LIGHTING</u></p> <p>Two (2) chrome plated Trucklite model # 15055, shielded LED step lights shall be provided in the dunnage area to provide adequate illumination of this area.</p> <p><u>SCENE LIGHTS - REAR OF BODY</u></p> <p>Two (2) Whelen # 6SC0ENZR super LED scene lights shall be provided, one on each side of the rear body panel in a chrome plated flange. The scene lights shall be controlled by a rocker switch in the master warning light switch console. All scene lights shall be wired through the load management system.</p> <p><u>REAR OF BODY LIGHT SWITCHING - CAB</u></p> <p>A switch shall be provided in the cab warning light switch console to turn the rear of body lights on and off.</p> <p><u>REAR SCENE LIGHTS - ADDITIONAL ACTIVATION</u></p> <p>In addition to the cab mounted switch for the rear scene lights, the rear scene lights shall illuminate when the transmission is placed in reverse gear and the apparatus is operating as an emergency vehicle (Primary Warning switch on).</p> <p><u>GROUND LIGHTS - CAB</u></p> <p>One (1) Truck Lite Model 44 LED ground light shall be provided under each side cab door entrance step, two (2) total. The ground lights shall turn on automatically with each respective door jamb switch and also by a master ground light switch in the warning light switch console.</p> <p>Each light shall illuminate an area at a minimum 30" outward from the edge of the vehicle. The rear crew door ground lights shall be positioned at an angle rearward to provide illumination at the pump panel and the front of the body work areas.</p> <p>**** BODY ELECTRICAL SYSTEM ****</p> <p><u>12 VOLT BODY ELECTRICAL SYSTEM</u></p> <p>All electrical lines in the body shall be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy solenoids and other major electrical controls shall be located in a central area near the circuit breakers.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p>All lines shall be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram shall be supplied with the apparatus.</p> <p>Wiring shall be carefully protected from weather elements and snagging. Heavy duty loom shall be used for the entire length. Grommets shall be utilized where wiring passes through panels.</p> <p>In order to minimize the risk of heat damage, wires run in the engine compartment area shall be carefully installed and suitably protected by the installation of heat resistant shielded loom.</p> <p>All electrical equipment shall be installed to conform to the latest federal standards as outlined in NFPA 1901.</p> <p><u>BODY ELECTRICAL JUNCTION COMPARTMENT</u></p> <p>A weather resistant electric junction compartment shall be provided within the body or pump enclosure, depending on vehicle configuration. This compartment shall provide an easily accessible enclosure to house all of the body wiring junction points, terminal strips, solenoids, etc. The design of this compartment shall not decrease the storage capacity area of the compartment or area in which it is located. A removable panel shall be provided for access to this compartment.</p> <p><u>PUMP ENCLOSURE WORK LIGHTS</u></p> <p>Two (2) Peterson model #M391 lights shall be provided inside the pump enclosure providing a minimum of 20 candlepower illumination. Each light shall have their own independent switch incorporated into the light head.</p> <p><u>ENGINE COMPARTMENT WORK LIGHTS</u></p> <p>Two (2) Peterson model #M391 lights shall be provided inside the engine enclosure that will provide a minimum of 20 candlepower illumination. Each light shall have their own independent switch incorporated into the light head.</p> <p><u>HANSEN COMPARTMENT LIGHTS - LED</u></p> <p>Each individual equipment storage compartment shall be equipped with Hansen LED track lighting, 10MM style, mounted on the forward (or rearward) vertical door frame.</p> <p>The lights shall come with a three (3) year warranty.</p> <p><u>TELESCOPING 155W SPECTRA LED FLOODLIGHTS – REAR OF DUNNAGE</u></p> <p>Two (2) 12 volt 215 watt Fire Research Spectra LED series Q20 telescopic lights shall be furnished. Lights shall be installed, one (1) each side, in the pump house dunnage area. Lights shall be controlled by an on/off switch located on each light head.</p> <p>Each lamp head shall have eighty four (84) ultra-bright white LEDs, 72 for flood lighting and 12 to provide a spot light beam pattern and shall operate at 12 volts DC, draw 18 amps, and generate 20,000 lumens of light. Each lamp head shall have a unique lens that directs flood lighting onto the work area and focuses the spot light beam into the distance. The lamp head angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob.</p> <p><u>DUNNAGE LIGHT SWITCHING - PUMP PANEL</u></p> <p>Two (2) switches shall be provided on the pump panel to turn the dunnage lights on and off. One (1) switch shall control the driver side light and one (1) switch shall control the officer side light.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT	Bidder Complies	
	Yes	No
<p><u>NFPA AUDIBLE AND LIGHTING WARNING PACKAGE</u></p> <p>The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard. The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.</p> <p><u>LIGHT PACKAGE ACTUATION CONTROLS</u></p> <p>The entire warning light package shall be actuated with a single warning light switch located on the cab switch panel. The wiring for the warning light package shall engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system shall be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.</p> <p><u>WARNING LIGHT FLASH PATTERN</u></p> <p>All of the perimeter warning lights shall be set to an NFPA compliant flash pattern by the apparatus manufacturer.</p> <p><u>UPPER LEVEL LIGHTING - WHELEN</u></p> <p><u>NFPA ZONE A, UPPER</u></p> <p>Whelen # JE2NFPA "Justice", 56" LED cab roof warning light bar shall be furnished and rigidly mounted on top of the cab roof.</p> <p>The light bar shall be equipped with the following:</p> <ul style="list-style-type: none"> • Clear Lenses • Four Corner Red Linear 6 LED's • Four Red Forward Facing CON 3 LED's • Two White Forward Facing CON 3 LED's. <p>If equipped, the forward facing white lights shall be automatically disabled for the "Blocking Right of Way" mode.</p> <p><u>NFPA ZONE C, UPPER</u></p> <p>Two (2) Whelen 90**5F*R, 900 super LED light heads shall be furnished and mounted one (1) each side on the upper rear face of the body, facing rear.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>NFPA ZONES B & D REAR, UPPER</u></p> <p>Two (2) Whelen 60*02F*R, 600 super LED light heads shall be furnished and mounted one (1) each side on the upper side face, towards the rear of the body, facing to each side of the unit.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p>		
COMMERCIAL PUMPER SPECIFICATIONS		

UNION COUNTY FIRE DEPARTMENT		Bidder Complies	
		Yes	No
<p><u>NFPA ZONES B & D FRONT, UPPER</u></p> <p>Two (2) Whelen 60*02F*R, 600 super LED light heads shall be furnished and mounted one (1) each side on the upper side face, towards the front of the body, facing to each side of the unit.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>LOWER LEVEL LIGHTING - WHELEN</u></p> <p><u>NFPA ZONE A, LOWER</u></p> <p>Two (2) Whelen 50*02Z*R linear super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a 5LSMAC chrome plated mounting flange.</p> <p>The lower zone A warning lights shall be mounted in the commercial chassis grille.</p> <p><u>NFPA ZONE C, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side directly below the DOT stop, tail, turn and backup lights.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p><u>NFPA ZONES B & D FRONT, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p> <p>The lower zone B & D warning lights shall be mounted on the sides of the commercial chassis hood.</p> <p><u>NFPA ZONES B & D MIDSHIP, LOWER</u></p> <p>Two (2) Whelen 60*02F*R 600 super LED light heads shall be provided and installed one (1) each side.</p> <p>Each light head shall be equipped with red LED's and a colored lens.</p> <p>The lights shall be installed with a chrome plated mounting flange.</p>			
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